

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

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| Applicant's or agent's file reference 0000053896 | FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416) | |
| International application No. PCT/EP2003/009594 | International filing date (day/month/year) 29 August 2003 (29.08.2003) | Priority date (day/month/year) \ 03 September 2002 (03.09.2002) |
| International Patent Classification (IPC) or national classification and IPC C12N 15/82, C12Q 1/68, C07K 14/415, C12N 15/29, 5/10 | | |
| Applicant SUNGENE GMBH & CO. KGAA | | |

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
- ☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of _____ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

| | |
|--|--|
| Date of submission of the demand 31 March 2004 (31.03.2004) | Date of completion of this report 01 July 2004 (01.07.2004) |
| Name and mailing address of the IPEA/EP | Authorized officer |
| Facsimile No. | Telephone No. |

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP2003/009594

I. Basis of the report

1. With regard to the elements of the international application:*

- ☒ the international application as originally filed
- ☒ the description:
pages _____ 1-53 _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☒ the claims:
pages _____ 1-25 _____, as originally filed
pages _____, as amended (together with any statement under Article 19
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☒ the drawings:
pages _____ 1/14-14/14 _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☒ the sequence listing part of the description:
pages _____ 1-17 _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☒ contained in the international application in written form.
- ☒ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

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III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application.

☒ claims Nos. 9-11

because:

☐ the said international application, or the said claims Nos. _____
relate to the following subject matter which does not require an international preliminary examination (*specify*):

☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. _____
are so unclear that no meaningful opinion could be formed (*specify*):

☐ the claims, or said claims Nos. _____ are so inadequately supported
by the description that no meaningful opinion could be formed.

☒ no international search report has been established for said claims Nos. 9-11

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the standard.

☐ the computer readable form has not been furnished or does not comply with the standard.

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V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

| | | | |
|-------------------------------|--------|------------|-----|
| Novelty (N) | Claims | 1-8, 12-25 | YES |
| | Claims | | NO |
| Inventive step (IS) | Claims | 1-8, 12-25 | YES |
| | Claims | | NO |
| Industrial applicability (IA) | Claims | 1-8, 12-25 | YES |
| | Claims | | NO |

2. Citations and explanations

1. The present application relates to a method for the targeted expression of nucleic acid sequences in non-reproductive flower tissues, i.e. not in pollen or ovaries, and methods for identifying promoters suitable for such purposes.
2. The promoters indicated in claim 1 are known from the prior art as sequences which are 5' from Arabidopsis genes. However, it was not known or obvious that these genes are expressed in non-reproductive flower tissues. The method as per claim 1 and the expression cassette according to claim 14 can therefore be considered novel and inventive.
3. The method according to claim 3 appears to be based on the assumption that the genes identified by the sequences are likewise expressed in non-reproductive flower tissues. However, it is not clear whether this is the case and whether the claimed invention can be carried out with each of these sequences. Furthermore, claim 3 is unclear since it refers to "variations" which are not specified any more closely.

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The same objection applies to the method as per
claim 6.

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

| | | | |
|-------------------------------|--------|------------|-----|
| Novelty (N) | Claims | 1-8, 12-25 | YES |
| | Claims | | NO |
| Inventive step (IS) | Claims | 1-8, 12-25 | YES |
| | Claims | | NO |
| Industrial applicability (IA) | Claims | 1-8, 12-25 | YES |
| | Claims | | NO |

2. Citations and explanations

1. The present application relates to a method for the targeted expression of nucleic acid sequences in non-reproductive flower tissues, i.e. not in pollen or ovaries, and methods for identifying promoters suitable for such purposes.
2. The promoters indicated in claim 1 are known from the prior art as sequences which are 5' from Arabidopsis genes. However, it was not known or obvious that these genes are expressed in non-reproductive flower tissues. The method as per claim 1 and the expression cassette according to claim 14 can therefore be considered novel and inventive.
3. The method according to claim 3 appears to be based on the assumption that the genes identified by the sequences are likewise expressed in non-reproductive flower tissues. However, it is not clear whether this is the case and whether the claimed invention can be carried out with each of these sequences. Furthermore, claim 3 is unclear since it refers to "variations" which are not specified any more closely.

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The same objection applies to the method as per
claim 6.